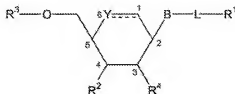


AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (currently amended) A compound comprising a structure of the formula



wherein L is a linking moiety;

B is a heterocyclic base;

R¹ is selected from the group consisting of a protecting group, a label, a solid phase, and -H;

R² is selected from the group consisting of -H and -OR⁶;

R³ is selected from the group consisting of a protecting group, a linking moiety covalently coupled to a solid phase, a phosphate, a phosphoramidite, an H-phosphonate, and a triphosphate;

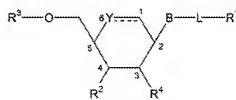
R⁴ is selected from the group consisting of -H, -OH, alkyl, halogen, -O-R⁵, -S-R⁵, NR^{5a}R^{5b}, a label, and a linking moiety covalently coupled to a solid phase;

R⁶ is selected from the group consisting of -H, a protecting group, a linking moiety covalently coupled to a solid phase, a phosphoramidite, and a H-phosphonate;

Y is selected from the group consisting of O, S, NR⁵, CR^{5a}R^{5b}, and CR^{5a}, and the bond between the C-1 atom of the six-membered ring and Y is a single bond when Y is O, S, NR⁵, or CR^{5a}R^{5b} and a double bond when Y is CR^{5a}; and

R⁵ is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, acyl, a protecting group, and -H, and R^{5a} and R^{5b} are selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, acyl, and -H, with the proviso that when R¹, R³, or R⁶ is a solid phase, then the other two residues selected from the group consisting of R¹, R³, and R⁶ are not a solid phase.

2. (original) The compound according to claim 1 wherein the linking moiety L comprises carbon, oxygen or nitrogen atoms and a reactive group.
3. (original) The compound according to claim 1 wherein R¹ is a label selected from the group consisting of a dye and a hapten.
4. (original) The compound according to claim 3 wherein R¹ is a dye selected from the group consisting of a fluorescein dye, a rhodamine dye, a cyanine dye, a coumarin dye, and an azo dye.
5. (original) The compound according to claim 3 wherein the hapten is biotin.
6. (currently amended) The A compound according to claim 1 comprising a structure of the formula



wherein

L is a linking moiety;

B is a heterocyclic base;

R¹ is selected from the group consisting of a protecting group, a label, a solid phase, and -H;

R² is selected from the group consisting of -H and -OR⁶;

R³ is selected from the group consisting of a protecting group, a linking moiety covalently coupled to a solid phase, a phosphate, a phosphoramidite, an H-phosphonate, and a triphosphate;

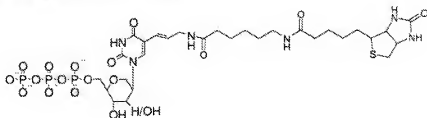
R⁴ is selected from the group consisting of -H, -OH, alkyl, halogen, -O-R⁵, -S-R⁵, NR⁵R^{5a}, a label, and a linking moiety covalently coupled to a solid phase;

R⁶ is selected from the group consisting of -H, a protecting group, a linking moiety covalently coupled to a solid phase, a phosphoramidite, and a H-phosphonate;

Y is CR^{5a} wherein R^{5a} is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, acyl, and -H, and the bond between the C-1 atom of the six-membered ring is a double bond; and

R⁵ is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, acyl, a protecting group, and -H, and R^{5a} and R^{5b} are selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, acyl, and -H.

7. (original) The compound according to claim 1 wherein Y is selected from the group consisting of O, S, and CR⁵R^{5b}.
8. (original) The compound according to claim 1 wherein R³ is a triphosphate, R² is -OR⁶ wherein R⁶ is -H, and R⁴ is -H or -OH.
9. (original) A compound having the formula:



10. (original) The compound according to claim 1 wherein R² is -OR⁶ wherein R⁶ is a phosphoramidite and R³ is a protecting group or a solid phase covalently coupled to a linking moiety.
- 11-34 (canceled)
35. (original) A kit of parts comprising a compound according to claim 8, nucleoside triphosphates, and a polymerase.
36. (original) A kit of parts comprising a compound according to claim 9, nucleoside triphosphates, and a polymerase.
37. (new) The compound according to claim 8 wherein B is a heterocyclic base selected from the group consisting of adenine, guanine, cytosine, thymine, uracil, and methylcytosine.
38. (new) The compound according to claim 1 wherein R² is -OR⁶ wherein R⁶ is a phosphoramidite and R³ is a protecting group or a solid phase.
39. (new) The compound according to claim 38 wherein R⁴ is -H or -OH.

40. (new) The compound according to claim 39 wherein Y is selected from the group consisting of O, S, and $\text{CR}^{\text{2a}}\text{R}^{\text{2b}}$.
41. (new) The compound according to claim 1 wherein B is a heterocyclic base selected from the group consisting of adenine, guanine, cytosine, thymine, uracil, and methylcytosine, Y is O, and R^4 is $-\text{H}$ or $-\text{OH}$.